

## Deep in the Heart of Texas

### Coyote Carrying Capacity

What do Houston toads, Attwater's prairie chickens, and black bears have in common? They are all part of our diverse Texas wildlife. Explore local wildlife, participate in hands-on activities and learn how you can help save these animals in the wild.

Carrying capacity is determined in part by limiting factors within a habitat that impact the health and behavior of wildlife populations. Coyotes are the population of focus for this activity that illustrates the importance of suitable habitat for wildlife and working together to help all in the pack survive.

#### Materials Needed

- 1) Multi colored poker chips

#### Activity Procedure

- 1) Label poker chips with numbers corresponding to pounds. Meat – 6; Insects – 8; Nuts and berries - 10
- 2) Spread out poker chips in an open area inside or outside.
- 3) Begin the student discussion by asking the group what they know about coyotes – what do they eat? How many are found in the Houston area? What do you think affects their population numbers the most?
- 4) Without further introduction, give them the game instructions.
  - a. When the teacher says go, their goal is to collect as many poker chips as you can.
- 5) When they all finish, have them come back to the group, stack their poker chips, and add up the points.
- 6) After they have added all their points up, tell them that those points represent food points. A coyote needs 40 food points per week to survive, or he begins to starve.
- 7) Have participants raise their hand if they have 40+ food points. These coyotes are healthy and happy.
  - a. Make sure that the number of poker chips/food points allows half of the group to get enough points. Consider adjusting the points or amount of chips on the group size.
- 8) Record the number of surviving coyotes. Have the students toss the poker chips all over the field again. Have a discussion before the next round –
  - a. What might the different color chips represent?
  - b. What problems do coyotes have with getting enough food?
  - c. What choices do coyotes have that don't get enough food?
  - d. If they choose to leave, what problems might they have?
- 9) Play the game again, count the points and record how many survive.



- 10) Have the group throw back the chips one more time and have them come back to the group. Introduce the fact that coyotes live in family units. They work together and share food. Have students get in groups of 3 or 4. Send them back out to get chips but this time, when all the chips have been picked up, they will need to redistribute the points within their family to see if they can get more coyotes to survive.
- 11) Bring up carrying capacity and limiting factors. Have students define these terms and what can affect the population numbers of any animal in a habitat.

### **More Information**

This activity was modelled after Limiting Factors: How Many Bears? from the Project Wild curriculum.